Promoting Safety for Surveyors?

The US$20 billion per annum market served by international offshore, marine and underwater engineering contractors is represented by the International Marine Contractors Association (IMCA). Its Offshore Survey Division is the most recently added division within the international trade association.<P>

Formed in 1997, the Offshore Survey Division is concerned with all aspects of equipment, operations and personnel relating to offshore survey operation. The IMCA has over 420 member companies in 48 countries around the globe – nearly 80 of those companies are members of the Offshore Survey Division.
By 'survey' in the IMCA, we mean such tasks as hydrographic survey of the seabed and route surveys for pipelines. Before an offshore structure is installed, moved or decommissioned, survey and positioning are also carried out. In addition, there are a variety of inspection and condition surveys of installed subsea architecture. These all require sophisticated positioning and recording equipment plus the skilled personnel that operate them. We do not speak for geophysical (seismic) survey in the IMCA.

Key areas of recent work designed specifically for the Division include competence standards for safety-critical personnel involved in the offshore survey industry, the development of technical standards aimed at enhancing the safety and efficiency of operations across the sector and a concerted effort to raise the profile of the industry.

Safety is Crucial
'Safety' is a word that I purposely used twice in the paragraph above. Safety and efficiency go hand in hand. There is nothing more important than safety – indeed, we often speak about zero accidents being the 'holy grail' of the industry. Those who have never been involved in offshore survey work could almost be forgiven for looking at pictures of offshore surveyors, geophysicists, data processors and survey engineers working in their own area on board a vessel, and thinking "So how does safety come into their role, they are surely working in a floating office?"

That 'floating office' has its own challenges; and many of the safety measures and guidelines written by our other divisions and core committees (safety environment and legislation, training, certification and personnel competence) are totally applicable to Offshore Survey Division member employees. Let us look at the life and work of those engaged in offshore survey and at some of the critical times in their day-to-day existence. Looking after members of the survey team during mobilisation, the actual working period, and during demobilisation are all vital.

An individual surveyor usually works as a member of a small team rather than a large crew – he or she could be hired in on a short-term contract and his stay on board could be limited. It is vital that as he moves from ship to ship there is a commonality of the safety ethic and of working practices, which together help the surveyor feel instantly 'at home' and safe. International guidelines that are not only recognised but also acted upon globally are vital; nothing beats robust efficient and effective safety management and procedures.

Mobilisation
This is a two-part issue. Firstly, the surveyor needs to safely get to the vessel. Not only has the IMCA developed 'Guidance on Travel Security' in document form, to address common risks likely to occur when travelling and to offer sensible guidance to the traveller, but there is also a handy pocket-sized security safety card that helps ensure exposure to dangerous and stressful situations when travelling can be avoided thanks to identifying and assessing risks, and by awareness training. The cross-industry Security Task Force set up by the IMCA is working on supplying sensible tools in the form of guidance notes to ensure the ongoing safety of the industry's personnel wherever they work in the world. Secondly, there is equipment mobilisation.

The Surveyor at Work
Once our surveyor has arrived safely at the vessel, which may be in a port or dry dock, equipment (perhaps bought in specifically for the task) has to be installed – the floor is up, there are cables everywhere, a multitude of subcontractors are all busy completing their own tasks; and he has to carry out the installation and testing of sensors and antennae. Or perhaps he has arrived when the ship is out in the field – climbing the mast to erect antennae most certainly has its own challenges! Safe use of certified and regularly checked vertical fall arrest systems is crucial.

Such basic safety guides as the IMCA 'working at height' and 'slips and trips' pocket-sized safety cards are most certainly worth absorbing and following to the 'nth degree'. And, so too, is learning from other people's experiences – one of the reasons that the IMCA provides safety flashes, information notes and annual safety statistics, with leading and lagging indicators, designed to act as a benchmarking tool. Learning from and sharing past experiences is invaluable.

Of course, some of the equipment is 'overboarded'. In this case, safe working practices on the back deck and in the deployment and recovery of equipment using cables and winches or A-frames and cranes over the side are the order of the day.

At the end there is demobilisation, which puts many of the above steps in reverse.

Throughout this time, IMCA material, often issued from the core committees, or other divisions, remains very useful to the surveyor. These include publications such as Guidance on the initial and refresher familiarisation of vessel crews , Basic safety training for non-marine personnel on specialist vessels , and Guidance document and competence tables: Offshore Survey Division , plus the safety cards and posters that apply to all personnel across the board. Other topics include guidelines on the safe use of electricity, on interventions, and permits to work systems that govern interaction with others or their interaction with our surveyor and all have their part to play.

There is a lot of IMCA material here and much more for the surveyor to understand and digest about his work both from his employer and from the new technology in a fast-moving profession. That is why the IMCA dwells so much on competence of employees to complete the actual tasks ahead of them. And that is why the IMCA competence framework and logbooks (there is a specific surveyor's logbook book) are so important.

Specifically for Offshore Survey Division Members
In line with the Association's overall and strategic objectives, each year the world-wide divisional management committee sets out a programme of specific projects and objectives that it will work towards achieving. The ongoing programme has focused, and continues to focus, on such requirements as the preparation of guidance on differential GPS installation and mobilisation, development of guidance on sharing of other vessel sensors, on safe manning levels, and on deep-water acoustic positioning.

The IMCA is also reviewing existing guidance on digital video offshore (keeping pace with the rapid developments the industry is seeing); and competence assurance and assessment specifically aimed at the Division. We are also engaged in a series of ongoing initiatives such as working with a world-wide focus, incorporating and supporting work within regional sections and subgroups, continuing to assist member companies in the implementation of competence assurance and assessment schemes, raising the profile of the Division and of surveyors with clients and potential trainees, and considering relevant issues on autonomous underwater vehicles.

Recent achievements have included the Inter-Vessel Survey Data Standard Telemetry Protocol , Guidelines for the use of Multibeam Echosounders (MBES) for Offshore Surveys , and the Marine Inspection Checklist for Small Workboats .

The growing trend towards multi-vessel operations and with offshore survey contractors often using different survey navigation software suites led to the Offshore Survey Division developing and successfully trialling a protocol to assist the industry, by promoting a level of standardisation in data telemetry.
Following extensive consultation on drafts with members and other industry bodies, Guidelines for the use of Multibeam Echosounders (MBES) for Offshore Surveys was the first technical publication from the Division and was well received, bearing the endorsement of Oil & Gas UK's (then UKOOA) Survey & Positioning Committee. While MBES have been in use since the 1960s, their use in commercial marine operations is much more recent. Drawing heavily on a number of existing standards and published papers, the document sets out for the first time guidelines specific to the use of this fascinating equipment in the offshore survey sector. ? Marine Inspection Checklist for Small Workboats is yet another safety aid, produced to assist survey contractors (and others) when chartering (or considering chartering) workboats and enable them to establish whether or not the boat is safe and suitable for the project.

Last, but not Least
The IMCA's Offshore Survey Division is concerned with ensuring new surveyors have received appropriate education in offshore surveying topics and techniques, attracting new recruits to the industry and ensuring the competence of personnel working in safety-critical positions. Full details on the various personnel initiatives undertaken by the IMCA for the offshore survey sector, and the careers leaflets and Offshore Survey Division case histories designed to provide a true flavour of life in this sector of the industry are available from the Association (8 1).